

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-22 (canceled).

Claim 23 (new): A thin-film magnetic head substrate comprising:

a ceramic base with a principal surface; and

an undercoat film, which is made of an aluminum oxide and which covers the principal surface of the ceramic base, an electrical/magnetic transducer being provided on the undercoat film,

wherein the substrate further includes an intermediate layer between the principal surface of the ceramic base and the undercoat film, and

wherein the intermediate layer is made of a material other than the aluminum oxide and has been patterned so as to make a portion of the principal surface of the ceramic base contact with the undercoat film.

Claim 24 (new): The thin-film magnetic head substrate of claim 23, wherein the intermediate layer has an opening where the electrical/magnetic transducer is not located.

Claim 25 (new): The thin-film magnetic head substrate of claim 24, wherein the electrical/magnetic transducer provided on the undercoat film includes: a lower magnetic shield film; a magneto-resistive element arranged on the lower magnetic shield film; and an upper shield film, which has been deposited on the lower magnetic shield film so as to cover the magneto-resistive element, and

wherein the intermediate layer has been patterned so as to cover the entire projection of the magneto-resistive element on the principal surface of the ceramic base.

Claim 26 (new): The thin-film magnetic head substrate of claim 25, wherein the

intermediate layer has been patterned so as to cover the entire projection of the lower magnetic shield film on the principal surface of the ceramic base.

Claim 27 (new): The thin-film magnetic head substrate of claim 23, wherein a portion of the intermediate layer makes an alignment mark for use in positional alignment.

Claim 28 (new): The thin-film magnetic head substrate of claim 23, wherein a portion of the intermediate layer makes a pattern representing identification information.

Claim 29 (new): The thin-film magnetic head substrate of claim 28, wherein the identification information includes information about the identity of the ceramic base.

Claim 30 (new): The thin-film magnetic head substrate of claim 28, wherein the pattern representing the identification information has been recorded on a plurality of areas of the principal surface of the ceramic base, mutually different pieces of the information being distributed to the respective areas.

Claim 31 (new): The thin-film magnetic head substrate of claim 30, wherein the areas are arranged so as to form multiple different thin-film magnetic heads when the substrate is divided.

Claim 32 (new): The thin-film magnetic head substrate of claim 23, wherein the intermediate layer has a thickness of 1 nm to 1 μ m.

Claim 33 (new): The thin-film magnetic head substrate of claim 23, wherein the intermediate layer is made of a metal film or an Si film.

Claim 34 (new): The thin-film magnetic head substrate of claim 23, wherein the intermediate layer is made of a material selected from the group consisting of Cu, alloys including Cu, Cr, alloys including Cr, and Si.

Claim 35 (new): The thin-film magnetic head substrate of claim 23, wherein the undercoat film has a thickness of 10 nm to 1 μ m.

Claim 36 (new): The thin-film magnetic head substrate of claim 23, wherein the ceramic base is made of an alumina-based ceramic material including 24 mol% to 75 mol% of α -Al₂O₃ and at most 2 mol% of an additive.

Claim 37 (new): The thin-film magnetic head substrate of claim 36, wherein the ceramic base further includes a carbide or nitride carbonate of a metal.

Claim 38 (new): A thin-film magnetic head slider comprising:
the thin-film magnetic head substrate of claim 23; and
an electrical/magnetic transducer, which is provided on the undercoat film of the thin-film magnetic head substrate.

Claim 39 (new): A hard disk drive comprising the thin-film magnetic head slider of claim 38.

Claim 40 (new): A method of manufacturing a thin-film magnetic head substrate that includes a ceramic base with a principal surface and an undercoat film covering the principal surface of the ceramic base, an electrical/magnetic transducer being provided on the undercoat film, the method comprising the steps of

forming a patterned intermediate layer, made of a non-aluminum-oxide material, on the ceramic base, and

forming an undercoat film, made of an aluminum oxide, on the ceramic base such that the undercoat film covers the patterned intermediate layer.

Claim 41 (new): The method of claim 40, wherein the step of forming the patterned intermediate layer includes the steps of:

depositing a film of the non-aluminum-oxide material on the ceramic base;
defining a patterned resist mask on the film;
etching away portions of the film that are not covered with the resist mask, thereby forming the patterned intermediate layer; and
removing the resist mask.

Claim 42 (new): The method of claim 40, wherein the step of forming the patterned intermediate layer includes the steps of:

defining a patterned resist mask on the ceramic base;
depositing a film of the non-aluminum-oxide material on the resist mask; and
making the patterned intermediate layer out of portions of the film by a liftoff process that removes the resist mask.

Claim 43 (new): The method of claim 40, wherein the step of forming the patterned intermediate layer on the ceramic base includes patterning the intermediate layer such that the intermediate layer has an opening where the electrical/magnetic transducer is not located.

Claim 44 (new): A method of making a thin-film magnetic head slider, the method comprising the steps of:

preparing the thin-film magnetic head substrate of claim 23; and
fabricating the electrical/magnetic transducer on the undercoat film.